For ‘master teachers,’ a chance to re-energize

Recruited participants in the Master Teacher initiative work to hone their skills, train colleagues and serve as mentors to future educators

Grand Island High School physics teacher Lee Nowocein, second from right, a master teacher, works on a physics lesson with student teachers at SUNY Buffalo State in the college’s science building earlier this month. Robert Kirkham/Buf News

By Denise Jewell Gee | News Staff Reporter | @DeniseJewellGee | Google+ on July 28, 2014 - 5:36 PM

Lee Nowocien waited one morning for hot glue to dry on a half dozen eggs inside a muggy science lab at SUNY Buffalo State. The eggs, glued to string, soon met their fate, cracked on the ground after swinging through the air on a pendulum. The Grand Island science teacher was re-creating a physics lesson on conservation of energy. Down the hall, another physics instructor, Lancaster’s Kathleen Stadler, worked with a group of teachers from Buffalo. This was summer break for Nowocien and Stadler, and they were loving it.

“I’m constantly reflecting, how can I get better? How can I do this? How can I do that?” Stadler said. “This is an environment where those things can actually come to life.” After more than a decade in the classroom, the teachers – recognized by the governor as among the best of the best – are reaching a point in their careers when they risk burnout. But they’ve found a place to recharge: a community of 48 math, science and technology educators recruited by the state as “master teachers.”

The year-old, state-funded Master Teacher program – modeled after the New York-based nonprofit Math for America – is aimed at changing the narrative that hangs over teaching today. “If all we do is wring our hands about what lousy teachers we have and how do we get rid of those lousy teachers, who wants to become a teacher?” said John Ewing, president of Math for America. “We’ve got to change the way the public and teachers themselves think about the profession.”

The Master Teacher program brings together the region’s top math, science and technology teachers to train each other and serve as mentors for future educators. Here is the idea: If you give proven, veteran teachers the time and resources to hone their skills, they’ll not only be more likely to stay in the classroom, they’ll bring back ideas to help colleagues and future teachers.

“There’s been a recognition that the countries that perform the best generally provide a lot of time for their teachers to interact and work together as professionals, and that’s something that we’ve just never focused on in

this country," said David Wilson, co-director of the Master Teacher program at Buffalo State. "This program is giving teachers a really unique opportunity to come together and share their ideas."

Buffalo State is one of nine SUNY campuses across the state that are hosting the state's Master Teacher program. A 10th site is based in New York City, where Math for America offers similar fellowships aimed at energizing the best math and science teachers.

The teachers make a four-year commitment to meet regularly throughout the year to improve their craft and help future educators develop teaching skills. They swap classroom tips, discuss teaching methods, design workshops and mentor those studying to become teachers. In Buffalo, they've led mini-courses on everything from genetics techniques to aerodynamics. Some have even made paper rocket launchers and other equipment they can take back to the classroom to teach the concepts of energy and motion.

"What we're really looking at is changing the landscape of teaching for New York State, where teachers are very much in the lead of sharing what's working well and helping each other troubleshoot when they're having any problems," said Josephine Salvador, director of the New York State Master Teacher Program.

There's a financial incentive, too. Teachers selected for the program through a rigorous application process that includes a test, interviews and transcripts earn an annual $15,000 stipend during the four years.

"Over and over again we hear from teachers that this has changed their career for them," Ewing said. "It gives them a setting in which they can meet with other professionals who are like them and who are really good at what they do and who are excited about it. This is a great retention tool."

One of the difficulties for math and science teachers, Stadler said, is that professional development opportunities in schools rarely focus on the content they teach.

For specialized classes, such as Advanced Placement physics, it's even more rare for teachers to have the opportunity to collaborate with others teaching the same course.

"There's so few of us that teach AP physics," said Stadler, a physics teacher at Lancaster. "You're like alone on an island."

A key component of the Master Teacher program is that the teachers decide what topics to explore and then design their own workshops and teams to train each other. That flexibility, Nowocien said, is also rare in teacher development.

"The idea of learning from each other is really critical," said David Henry, one of the co-directors of the Master Teacher program at Buffalo State.

Nowocien, who has taught physics in Grand Island for 12 years and was named a master teacher this spring, said he's already seen a payoff. After sitting in on a session on "flipped" classrooms – in which students watch video lectures at home in preparation for classroom work the next day – he had an idea. Why not use that concept to help his annual review sessions for the Regents exam?

He assigned videos that reviewed material his students had already been taught, freeing up time in class to answer questions and work with students one-on-one. His students this year had the best Regents results he's seen in his career. While the updated review sessions weren't the only driving force behind the improved results, he said, they helped.

"That one thing just kind of inspired me to change something in my own teaching style," Nowocien said.